



King County
Department of
Local Services

BARING BRIDGE #509A



KING COUNTY
LANDMARKS COMMISSION BRIEFING

February 28, 2019



Baring Bridge # 509A

Activity since last meeting

- Jan 2019 – Public Outreach
 - Project website activated, Frequently Asked Questions posted
 - Informational signs posted on site with flyers
 - 257 surveys and flyers mailed to area (25 survey responses received)
- 1/26/19 – Open House
 - Held at Fire Station in Baring
 - Approximately 50 attendees with 17 face-to-face interviews
- 2/8/19 – Project Team Workshop
 - 17 attendees, King County and consultant team included various technical disciplines
 - Evaluated selection criteria for bridge type and location
 - Held discussions over each criteria and score
- 2/22/19 – Preferred alternative selected by King County



Baring Bridge # 509A

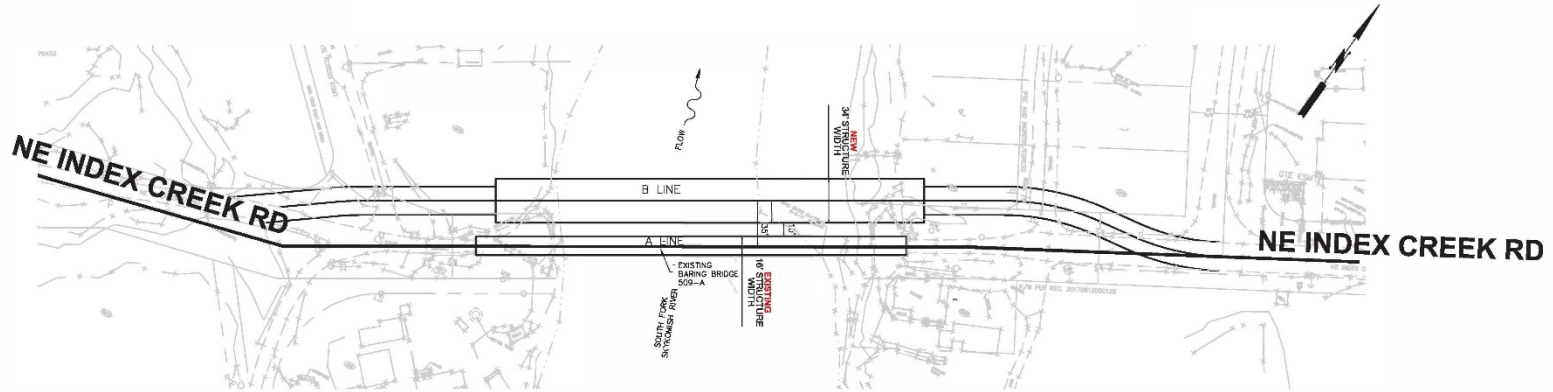
DESIGN CONSIDERATIONS

- Access during construction
- Hydraulic (flood plain/floodway) constraints for pier placement
- King County Historic Landmark
- Community input on location and bridge type
- Aesthetics – context sensitivity, proper fit for setting
- Environmental impacts and mitigation requirements
- Geometry of alignment and profile of approach roadways
- Challenging geotechnical and artesian aquifer conditions
- Minimizing right-of-way impacts
- Construction risks and temporary staging
- Construction duration
- Construction cost
- Bridge life cycle costs (maintenance, repair and inspection costs)

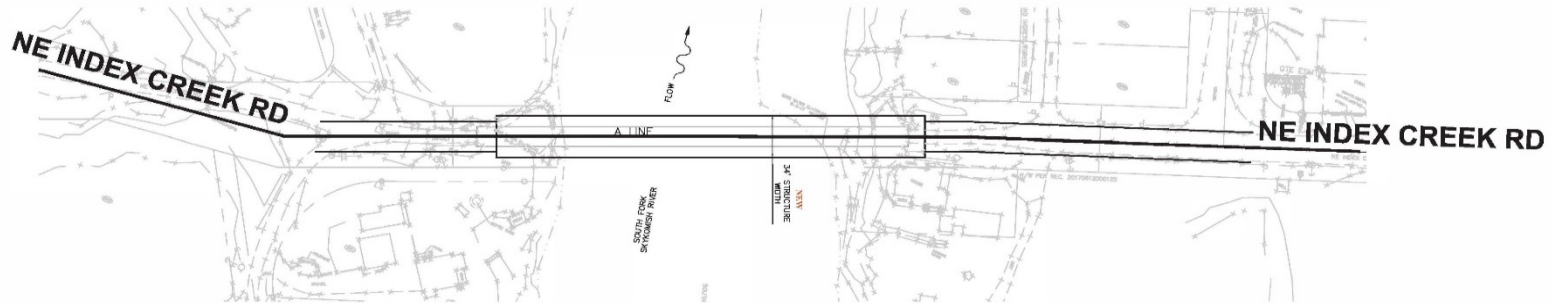


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Overview of Two Alignment Alternatives



ALTERNATIVE A
NEW BRIDGE ON PARALLEL DOWNRIVER ALIGNMENT



ALTERNATIVE B
NEW BRIDGE ON EXISTING LOCATION



Bridge types - overview

➤ Steel Truss



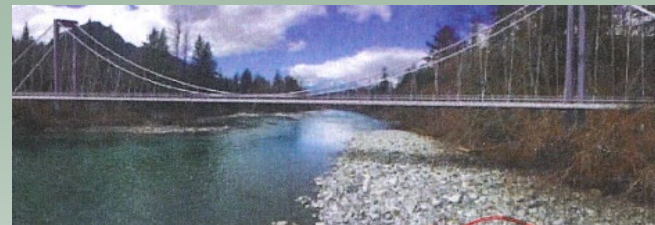
➤ Steel Network Tied Arch



➤ Cable stayed



➤ Suspension





Baring Bridge # 509A

Alignment Scoring

Description	Weight 1=least, 5=most	Alignment Alternative A Downriver Location		Alignment Alternative B Existing Location	
		Rank	Score	Rank	Score
<p>Rank: 1=Bad, 2=Poor, 3=Fair, 4=Good, 5=Best</p> <p>Score=Weight x Rank</p>					
Environmental Impacts & Mitigation Requirements	5	3	15	5	25
Community Input – desired bridge location	4	4	16	3	12
Geometric Constraints (includes approach roadway and alignment)	3	2	6	4	12
Minimize right-of-way Impacts	5	2	10	3	15
Bridge Life Cycle Cost (Maintenance, Repair, and Inspection Costs)	5	1	5	5	25
Preserve Landmark Bridge	4	5	20	1	4
Construction Cost	5	4	20	3	15
County Liability	3	2	6	3	9
Total Score			98		117



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Bridge Type Scoring

Description	Weight 1=least, 5=most	Alternative 1 Steel Truss		Alternative 2 Steel Network Tied Arch		Alternative 3 Cable Stayed		Alternative 4 Suspension	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score
<p>Rank: 1=Bad, 2=Poor, 3=Fair, 4=Good, 5=Best</p> <p>Score=Weight x Rank</p>									
Context Sensitivity – proper fit for setting	3	4	12	2	6	1.5	4.5	5	15
Community Input – desired bridge type	4	2	8	1	4	2	8	5	20
Bridge Foundation Risk (Artesian aquifer)	5	4	20	4	20	2	10	3	15
Local Contractor's Qualifications and Experience	2	5	10	4	8	3	6	2	4
Constructability Risks and Staging	4	5	20	3	12	2	8	4	16
Environmental Impact	4	3	12	3	12	2	8	3	12
Construction Duration	2	5	10	4	8	1	2	3	6
Construction Cost	5	5	25	4	20	2	10	2	10
Bridge Life Cycle Cost (Maint/Repair/Insp Costs)	5	3	15	3.5	17.5	3.5	17.5	4	20
Total Score			132		107.5		74		118



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Preferred Alternatives

Alignment Alternative B

Build at existing location

Remove existing bridge

Structure Alternative 1

Steel Truss Bridge



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PLANNED NEXT STEPS

- Complete final Type, Size and Location Report
- Prepare 30% design of preferred alternative



King County

Department of Local Services
Road Services Division

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THANK YOU